



80 Seymour Street, Hartford Connecticut 06106
August 6th 2018

To: Penny Lanzisera
Senior Health Physicist
U.S. Nuclear Regulatory Commission
2100 Renaissance Boulevard, Suite 100
King of Prussia, PA 19406

From: Bette W. Blankenship M.S., D.A.B.R.
Medical Physicist and Radiation Safety Officer
Hartford Hospital
Department of Radiation Safety
RAM License No. 06-0025304

Regarding: Follow up from our telephone conversation specific to PET/CT imaging at Hartford Hospital

Dear Ms. Lanzisera;

As discussed during our telephone call, within the past weeks the Radiation Safety Officer identified concerns with patient administration and uptake of F-18 FDG. Per observation, the administration and uptake procedures were in conflict with requirements documented in the hospital radioactive materials (RAM) license, and NRC regulation. The RSO noted nuclear medicine staff members had been approved to administer F-18 FDG at patient bedside if patient transportation to the department for administration and uptake was not possible. In addition, nuclear medicine staff members were approved to allow patient visitors to remain with patients during F-18 FDG administration and uptake. Upon RSO discovery, the inappropriate F-18 FDG administration and uptake process was stopped.

From our conversation, you requested a letter indicating facility identification of an item of non-compliance to NRC regulation and non-compliance with the facility RAM license commitments, to include the following:

1. Document how long the patient-ward F-18 FDG administration practice has been in place and how many bedside F-18 FDG administrations have occurred.
2. Specific to the F-18 FDG activities used by the facility, indicate exposure-rate at bedside and 3 feet from bedside to approximate the exposure-rate possible to a visitor and/or patient ward staff.
3. Approximate the radiation dose possible to visitors (the general public) and that before the visit, the Authorized User as defined in 10CFRPart 35, determined the visit as appropriate.

In Response:

1. Document how long the patient-ward F-18 FDG administration practice has been in place and how many bedside F-18 FDG administrations have occurred:

We have estimated that approximately twelve to fifteen F-18 FDG administrations with patient rest outside the Nuclear Medicine department occurred each year beginning in 2005. Patient acuity prevented transportation to the department for the F-18 FDG administration and uptake.

2. Specific to the F-18 FDG activities used by the facility, indicate exposure-rate at bedside and 3 feet from bedside to approximate the exposure-rate possible to a visitor and/or patient ward staff:

The physician/authorized user approved F-18 FDG patient administration activity range is: 8 and 17 mCi, dependent upon patient size. Exposure-rate measurements have been documented following patient administration to indicate:

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Instrumentation: Victoreen 451p Ion-Chamber Natural Background Measurement: 0.016 mR/hr


Activity Administered	Immediately Following Administration		End of Uptake Period 45-60 Minutes		After Patient Void Following 45-60 Minutes	
	mCi	mR/hr	mR/hr	mR/hr	mR/hr	mR/hr
16.4	Bedside	32	Bedside	15	Bedside	10
	3 Feet	6	3 Feet	6	3 Feet	4
12.8	Bedside	25	Bedside	15	Bedside	14
	3 Feet	8	3 Feet	4	3 Feet	3
13.8	Bedside	28	Bedside	15	Bedside	11
	3 Feet	9	3 Feet	5	3 Feet	4
13.2	Bedside	16	Bedside	10	Bedside	6
	3 Feet	5	3 Feet	3	3 Feet	3
12.4	Bedside	20	Bedside	12	Bedside	9
	3 Feet	9	3 Feet	5	3 Feet	4

- Approximate the radiation dose possible to visitors (the general public) at 3 feet and that before the visit the Authorized User as defined in 10CFR Part 35, determined the visit as appropriate.

Visitor access was not documented for the F-18 FDG patients. If a visitor was allowed access to the administered patient, the exposure-rate (as indicated above) would have provided a cumulative exposure less than 50 mRem for the visitor.

Please contact me with any questions or if additional information is needed.

Thank you,



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